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EXAMINER

HOUSE, LETORIA G

ART UNIT PAPER NUMBER

3672

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/804,456

Applicant(s)

DALLAS, L. MURRAY

Examiner

Latoria House

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/19/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The Examiner suggests: Coiled Tubing Injector for Injecting Tubings of Various Diameters and Method.
2. The disclosure is objected to because of the following informalities: There is a misspelled word on page 12 at paragraph [0043]. In the second sentence of the paragraph the word "chain" is spelled "chin."

Appropriate correction is required.

### ***Claim Objections***

3. Claim 18 is objected to because of the following informalities: it is dependent upon a non-existing claim. For examining purposes, the Examiner interprets the claim as dependent upon claim 16. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Avakov et al. (U.S. 6,209,634).

With regard to claim 1, the reference discloses a frame structure for mounting above a wellhead (12); and at least one gripper chain drive system mounted to the

Art Unit: 3672

frame structure (10, 32, 35) and having a plurality of opposed gripping blocks (128) adapted to grip at least one of at least three differently-sized coil tubing strings (18) for injecting the coil tubing strings into and extracting the coil tubing strings from a subterranean well.

With regard to claim 2, the reference teaches the apparatus wherein each gripping block (128) comprises at least one gripping surface (129) adapted to grip one of the plurality of coil tubing strings.

With regard to claim 3, the reference teaches the apparatus wherein the gripping surface (129) is concave.

With regard to claim 4, the reference teaches the apparatus comprising a single gripper chain drive system having a pair of opposed gripper chain drives, each gripper chain drive including a plurality of substantially identical gripping blocks (128).

With regard to claim 14, the reference discloses the apparatus wherein the at least one gripper chain drive system comprises a pair of opposed gripper chain drives (126), each gripper chain drive having a drive sprocket (110) mounted to a drive shaft (112), each drive shaft being coupled to a motor (118) whereby the drive shafts (112) of the opposed gripper chain drives are rotated at a same angular velocity but in opposite rotational directions.

With regard to claim 15, the reference discloses the apparatus wherein each gripper chain (126) further comprises an idle sprocket (120) mounted to an idle shaft (122); and a gripper chain (126) engaged with the drive sprocket (110) and the idle

Art Unit: 3672

sprocket (120), the gripper chain (126) having the gripping blocks (128) attached around an outer periphery of the gripper chain (126).

With regard to claim 16, the reference discloses the apparatus wherein each gripper chain drive further comprise a pressure beam (150) supported by the frame structure and movable with respect to the frame structure (10, 32 35), the pressure beam (150) being adapted to support the gripper chains while the gripper chains grip the coil tubing string (18).

With regard to claim 17, the reference teaches the apparatus comprising a roller chain system (172) operatively mounted to the pressure beam (150) for reducing friction between the pressure beam (150) and the gripper chain (126).

With regard to claim 18, the reference teaches the apparatus wherein the pressure beam (150) is connected to an actuator (183) mounted to the frame structure for moving the pressure beam (150).

5. Claims 1-4, and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Dallas (U.S. 6,516,891).

With regard to claim 1, Dallas discloses a coiled tubing assembly comprising: a frame structure (26) for mounting above a wellhead; and at least one gripper chain drive system (38) mounted to the frame structure and having a plurality of opposed gripping blocks (62) adapted to grip at least one of at least three differently-sized coil tubing strings (18, 22) for injecting the coil tubing strings into and extracting the coil tubing strings from a subterranean well.

With regard to claim 2, the reference discloses the apparatus wherein each gripping block (62) comprises at least one gripping surface adapted to grip one of the plurality of coil tubing strings.

With regard to claim 3, the reference teaches the apparatus wherein the gripping surface is concave. See Figure 5.

With regard to claim 4, the reference teaches the apparatus comprising a single gripper chain drive system (38) having a pair of opposed gripper chain drives (42), each gripper chain drive including a plurality of substantially identical gripping blocks (62).

With regard to claim 14, the reference discloses the apparatus wherein the at least one gripper chain drive system (38) comprises a pair of opposed gripper chain drives (42), each gripper chain drive having a drive sprocket (44) mounted to a drive shaft (46), each drive shaft being coupled to a motor (52) whereby the drive shafts (46) of the opposed gripper chain drives are rotated at a same angular velocity but in opposite rotational directions.

With regard to claim 15, the reference discloses the apparatus wherein each gripper chain (42) further comprises an idle sprocket (48) mounted to an idle shaft (50); and a gripper chain (42) engaged with the drive sprocket (44) and the idle sprocket (48), the gripper chain (42) having the gripping blocks (62) attached around an outer periphery of the gripper chain (42).

With regard to claim 16, the reference discloses the apparatus wherein each gripper chain drive further comprise a pressure beam (86) supported by the frame structure (26) and movable with respect to the frame structure, the pressure beam (86)

Art Unit: 3672

being adapted to support the gripper chains (42) while the gripper chains grip the coil tubing string (18, 22).

With regard to claim 17, the reference teaches the apparatus comprising a roller chain system (84) operatively mounted to the pressure beam (86) for reducing friction between the pressure beam (86) and the gripper chain (42).

With regard to claim 18, the reference teaches the apparatus wherein the pressure beam (86) is connected to an actuator (92) mounted to the frame structure for moving the pressure beam (86).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 5-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dallas (U.S. 6,516,891) in view of Dearing et al. (U.S. 2002/0125014).

Dallas recites the apparatus as applied to claims 1-4, and 14-18 above, but fails to teach the gripping blocks having at least three gripping surfaces; wherein each gripping block has three differently-sized gripping surfaces for gripping at least one of three differently-sized coil tubing strings; the blocks having four differently-sized gripping surfaces for gripping at least one of four differently-sized coil tubing strings; the gripping blocks having five differently sized gripping surfaces for gripping at least one of five differently sized coil tubing strings; the assembly comprising at least three independently drivable griper chain drive systems, wherein each block has a single gripping surface; three gripping chain drive systems with a differently-sized gripping surface; four gripper chain drive systems having differently-sized gripping surfaces; five gripper chain drive systems having differently-sized gripping surfaces.

Dearing et al. discloses an apparatus to run two or more differently sized, spooled tubing strings simultaneously into a well. See disclosure page 2, paragraph [0030]. Dearing et al. suggests that multiple tubing strings are simultaneously run into the well for a variety of reasons, such as to provide multiple strings for injecting materials into the well. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the injection assembly to Dallas to accommodate two or more differently sized tubing strings as suggested by Dearing et al. in order to reduce running time and to produce gas wells to their economic limit by moving formation liquids upwardly to the surface while maintaining constant gas flow.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Parks (U.S. 6,230,955) discloses a tubing injection system with gripper blocks. Avakov (U.S. 5,094,340) is incorporated into Avakov et al. (U.S. 6,209,634) by reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

LGH

Application/Control Number: 10/804,456

Art Unit: 3672

Page 9